AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the applications:

Listing of Claims:

1. (Currently amended) Measuring apparatus for providing information on the relative location of a target site which is radiating a target signal that includes a predetermined pulse signal, the apparatus comprising ~~receiver means~~ at least two spaced receivers for providing respective ones of a pair of temporally spaced output pulses in response to the same part of a single received said predetermined pulse signal, said receivers including a correlator for correlating received signals with replica signals to provide said output pulses, and ~~cross-correlation means~~ a cross-correlator coupled to said receiver means for cross-correlating said pair of output pulses ~~or signals derived therefrom~~.

2. (Cancelled)

3. (Currently amended) Apparatus according to ~~claim 2~~ claim 1 and including direction determining means for providing a direction signal indicative of the direction of the target site from the output of said ~~cross-correlation means~~ cross-correlator and the spacing of said two receivers.

4. (Currently amended) Apparatus according to claim 3 ~~wherein the receiver means comprises~~ including at least three non-collinear receivers, and wherein the direction determining means is arranged to provide at least two said direction signals from different pairs of said receivers, and to combine said at least two direction signals for providing a more precise indication of the direction of the target site.

5. (Original) Apparatus according to claim 3 wherein one said receiver is movable relative to the other between at least two positions in a direction transverse to the line joining them, and the direction determining means is arranged to provide at least two said direction signals corresponding to said two different positions, and to combine said at

least two direction signals for providing a more precise indication of the direction of the target site.

6. (Original) Apparatus according to claim 3 and including rotation means for detecting rotation of the apparatus, wherein the direction determining means is arranged to combine direction signals when the apparatus is in at least two different rotational positions for providing a more precise indication of the direction of the target site.

7. (Currently amended) ~~Apparatus according to claim 1~~ Measuring apparatus for providing information on the relative location of a target site which is radiating a target signal that includes a predetermined pulse signal ~~for use with a target site which is emitting a said predetermined pulse signal~~ that includes at least two pulse waveforms with a predetermined temporal spacing, ~~and said pair of output pulses is provided from~~ the apparatus comprising a receiver for providing a pair of temporally spaced output pulses in response to said two pulse waveforms of said predetermined pulse signal, ~~received by a single receiver of said receiver means~~ and a cross-correlator coupled to said receiver for cross-correlating said pair of output pulses or signals derived therefrom, and including a Doppler processor for determining Doppler parameters from the output of said cross-correlation.

8. (Cancelled).

9. (Currently amended) Apparatus according to ~~claim 8~~ claim 7 and including ~~resampling means~~ a sampler ~~coupled~~ for resampling the output of the receiver ~~means~~ in response to the output of the Doppler ~~means~~ processor.

10. (Currently amended) Apparatus according to ~~claim 2~~ claim 1 for use with a target site which is emitting a said predetermined pulse signal that includes at least two pulse waveforms with a predetermined temporal spacing followed by a third pulse waveform providing said same part of said received signal.

11. (Cancelled)

12. (Cancelled)

13. (Currently amended) Apparatus according to ~~claim 11~~ claim 1 ~~wherein~~ including multiple path determining means ~~is coupled to the output of said autocorrelation means~~ for determining multiple path propagation of the received said pulse signal.

14. (Original) Apparatus according to claim 13 and including means responsive to the output of said multiple path determining means for effectively synchronising and adding said target signal which has been received over at least two different said multiple paths.

15. (Currently amended) Measuring equipment comprising measuring apparatus according to ~~claim 1~~ claim 7 and further including a target unit for emitting a target signal from said target site.

16. (Cancelled)

17. (Currently amended) Equipment according to ~~claim 16~~ claim 15 wherein said pair of waveforms are frequency modulated waveforms.

18. (Currently amended) Equipment according to ~~claim 16~~ claim 15 wherein said pair of waveforms are chirps.

19. (Currently amended) Equipment according to ~~claim 16~~ claim 15 wherein said pair of waveforms are identical.

20. (Original) Equipment according to claim 15 wherein said predetermined pulse signal comprises a digital waveform.

21. (Currently amended) Equipment according to ~~claim 16~~ claim 15 wherein said pair of waveforms are followed by a digital waveform.

22. (Previously amended) Equipment according to claim 20 wherein said digital waveform has good correlation properties.

23. (Previously amended) Equipment according to claim 20 wherein said digital waveform is selected from a pseudo-random maximal length sequence, a Gold code or a Kasami code.

24. (Currently amended) Equipment according to ~~claim 8~~ claim 7 and including range determining means for determining a range from the timing of the received target pulse signal, said range determining means being coupled to the output of the Doppler ~~means~~ processor for correcting the range to take account of Doppler effects.

25. (Currently amended) A method of determining the direction of a source of pulse signals, the method comprising receiving the same predetermined pulse at two spaced receivers to provide respective first and second outputs, correlating said first and second outputs against replica signals and cross-correlating the outputs of the correlation with replica signals with each other to determine the difference in time of arrival, and computing an~~d~~ angle relative to the line joining the receivers from the time difference and the spacing of the receivers.

26. (Original) A method of determining range of a target on the basis of the time of flight of signals transmitted between the target and a measuring unit, wherein the target provides a pair of pulses with a predetermined temporally spacing, the method including the step of receiving the temporally spaced pulses at the measuring unit, correlating one received pulse against the other and deriving Doppler information from the resulting signal, and using the Doppler information to correct the measured range.

27. (Original) A method according to claim 26 wherein the Doppler information is used to correct the time of flight prior to calculation of the range.

28. (New) A method according to claim 25, wherein said first and second outputs are corrected for Doppler prior to correlation with a replica signal.